CASE REPORT

Catatonia: Intensive Care Unit Perspectives

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Abstract

Catatonia is a well-known psychiatric disorder. However, there is evolving evidence of it presenting in several medical and affective disorders. Familiarity with the diagnosis and presentation of catatonia in the intensive care unit (ICU) is often lacking among the intensivists. We hereby report a case of catatonia in a young patient with no history of psychiatric disorders in the past. He underwent a battery of tests to determine the cause of his altered mental status. He was treated with benzodiazepines following a lorazepam test when catatonia was suspected leading to an improvement in his condition. Awareness about catatonia among physicians and intensivists can lead to an early diagnosis and management of such cases.

Keywords: Altered mental status, Benzodiazepines, Case report, Catatonia, Intensivist.

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Introduction

Catatonia was previously defined exclusively under and as a psychiatric disorder. However, current evidence clearly suggests that it can also present in several medial and affective disorders (depression, anxiety, or bipolar disorder).[1] Catatonia in the intensive care unit (ICU) is often misdiagnosed or there is a delay in diagnosis mainly because of a lack of familiarity with the disease/syndrome. The way intensivists approach such cases is often based on in search for an organic cause. There is a lack of literature on catatonia and its management in the ICU with very few case series describing its occurrence in the ICU and the need for awareness among intensivists.[2,3]

The Diagnostic and Statistical Manual of Mental Disorders (DSM-V) defines catatonia as the presence of three or more of the following—catalepsy, waxy flexibility, stupor, agitation, mutism, negativism, posturing, mannerisms, stereotypies, grimacing, echolalia, and echopraxia.[4] There is a need to define catatonia as an independent diagnostic entity.[5]

Case Description

A 26-year-old man, an army personnel by profession, was admitted to the ICU with acute onset of encephalopathy following 1 week of routine training. There was no history of fever, seizures, vomiting, headache, or photophobia. He had no past history of any psychiatric disease. On examination, he had rigidity involving all four limbs and his Glasgow Coma Scale was E2V1M5. There were periods of agitation and mutism during the initial phase. A battery of tests was performed to rule out an organic cause which involved magnetic resonance imaging of the brain with a venogram, computed tomography scan of the brain, electroencephalogram, and a toxicology screen, which were nonsignificant. His laboratory reports were unremarkable other than serum creatine phosphokinase (CPK) of 4800 IU/L. He was hydrated adequately with intravenous (IV) fluids till his CPK started trending below 1000 IU/L. The patient was started on treatment in lines of meningoencephalitis with IV antibiotics and antivirals. A cerebrospinal fluid (CSF) examination was planned immediately. While performing the procedure, we decided to give midazolam 2 mg bolus to facilitate the procedure.

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Immediately post IV midazolam, we noticed that the patient's symptoms improved dramatically with regard to mobility and speech. His symptoms reappeared within 30 minutes after a brief period of improvement. That was when an alternate diagnosis of catatonia was contemplated and after a psychiatric opinion, the patient was started on lorazepam 2 mg IV every 8 hours. CSF analysis and cultures were negative for bacterial/viral meningoencephalitis. His symptoms improved within 24 hours. He was discharged after 1 week with tapering doses of lorazepam and to be followed up after 1 week by a psychiatrist/physician (Table 1).[4]

Discussion

Catatonia is a neuropsychiatric syndrome of altered mental status and characteristic psychomotor findings, which can occur in response to a wide variety of psychiatric, neurological, and medical conditions. The misconception that catatonia is exclusively seen or related to psychiatric disorders was challenged by a few authors in their case series.[2,3] In a letter to the editor, Rizos et al. argued that catatonia, based on current diagnostic criteria, is difficult to diagnose in the ICU, and moreover, it strongly coincides with symptoms of common presentation like hypoactive delirium.[5] Hence, there is a need to accurately diagnose and manage catatonia, which can help the intensivist avoid inappropriate interventions.

Table 1: DSM criteria for catatonia (ref DSM)

Symptoms	*Description*
Stupor	No psychomotor activity; not actively relating to the environment
Cataplexy	Passive induction of posture held against gravity
Waxy flexibility	Slight, even resistance to positioning by the examiner
Mutism	No, or very little, verbal response
Negativism	Opposition or no response to instruction or external stimuli
Posturing	Spontaneous and active maintenance of posture against gravity
Mannerism	Odd, circumstantial caricature of normal actions
Stereotypy	Repetitive, abnormally frequent, and nongoal-directed activities
Agitation	Without apparent cause
Grimacing	Facial expression of disgust, disapproval, or pain
Echolalia	Mimicking another's speech
Echopraxia	Mimicking another's movements

Incidence of catatonia secondary to a medical illness ranges from 7 to 45% in various clinical settings; however, its exact prevalence within the ICU is unknown and can affect up to 4% of critically ill patients.[6] There is heterogenicity in the pathophysiological mechanism of catatonia with dysregulation of basal ganglia-thalamic cortical circuit leading to changes in neurotransmitter function as the main precipitating factor.[7]

Our patient had no prior psychiatric issues and symptoms of altered mental status, along with overall rigidity, led to a diagnosis of meningoencephalitis after ruling out an organic cause. It was only accidentally that we stumbled upon improvement in symptoms with benzodiazepines. This is when we went back to literature and strongly considered a differential diagnosis of catatonia. Retrospectively, we found symptoms like waxy flexibility, posturing, and staring present in our patients. As an intensivist, we ideally do not do a detailed psychiatric assessment, nor do we give importance to these differentials when the patient had no psychiatric problems previously. Hence, it's likely that the diagnosis of catatonia is often delayed or missed. There is a long list of differential diagnoses for catatonia in the ICU, most commonly septic encephalopathy, delirium, metabolic disorders, neuroleptic malignant syndrome, serotonin syndrome, central nervous system infections, cerebrovascular events, vegetative states, nonconvulsive seizures, and autoimmune encephalopathy. Whenever catatonia is suspected, a "lorazepam test," that is, 1–2 mg of lorazepam IV can be given to look for improvement in symptoms and diagnose catatonia. This test is associated with improvement in symptoms within 10 minutes and an overall response rate of 60–80% within hours to days.[8]

Another treatment option includes electroconvulsive therapy which is reserved for benzodiazepine-resistant catatonia. Pharmacological therapies like memantine, amantadine, valproate, zolpidem, and phenobarbital have also been tried as adjuvant to benzodiazepines.[9]

Sudden withdrawal of benzodiazepines in the elderly when they present to the ICU is also one of the common causes of catatonia.

Differentiating catatonia from delirium, which is a more common occurring phenomenon in the ICU, is quite important. In a randomized study by Wilson et al., they found that delirium is more common than catatonia (43 vs 3%) but can coexist in 31% of critically ill ICU patients requiring mechanical ventilation/vasopressor support.[10] Sorting a psychiatric opinion also becomes important in patients with delirium in the ICU who are concomitantly showing signs and symptoms of catatonia.

Conclusion

Catatonia is a clinical entity often underdiagnosed or overlooked in patients presenting to the ICU. Intensivists and clinicians need to look actively for the presence of features of catatonia in patients presenting with altered mental status with or without a history of prior psychiatric disease.

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